

## WEATHER IN THE UNITED STATES

## THE WEATHER ELEMENTS

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## GENERAL SUMMARY

The weather for April was decidedly warmer than normal except in the Northeast where it was abnormally cold during the latter part of the month as far south as North Carolina and Tennessee, while in the South generally about normal temperatures prevailed.

The precipitation for the month was deficient in most sections. However, rather heavy amounts were received in the Southeast over much of Georgia and Florida, while in the central Great Plains, portions of the northern Rocky Mountain and Plateau regions and in parts of the Lake region and upper Mississippi Valley the monthly totals were above normal. On the other hand only small amounts were received over most other sections; they were markedly deficient from the Ohio Valley southward to the Gulf and westward to Oklahoma and central Texas, while in some sections of the far Southwest the month was rainless, and nearly all sections west of the Great Plains, except the far North, received only scanty amounts. The severe drought that had prevailed for some time in portions of the Southwest was generally relieved the latter part of the month. On the other hand droughty conditions have developed in many sections of the East and the Mississippi Valley from Missouri and central Illinois to the Gulf.

## PRESSURE AND WINDS

The month opened with high pressure and fair weather in the Southeast, while elsewhere generally low pressure prevailed with light snow over portions of the Lake region and a few scattered localities to the westward. During the next several days precipitation prevailed in many localities of the East, accompanied by thunderstorms and rather heavy rain in portions of the Southeast, while from the Rocky Mountain region westward no precipitation was reported during the first decade of the month, except in the north Pacific region where light rain fell every day after the 2d, and a few scattered showers were received in the central Plateau region during the latter part of the decade. From the 4th to the 8th a low-pressure area moved from the west Gulf region easterly and northeasterly along the coast, accompanied by light to moderate precipitation in the South, but as the storm progressed northward it increased in intensity, and generous to heavy precipitation prevailed on the 7th and 8th in many localities of the Northeast. This storm was followed by a high-pressure area accompanied by fair weather which overspread most sections east of the Rocky Mountains by the end of the decade.

During the first half of the second decade generally high pressure and fair weather prevailed throughout much of the South, while relatively low pressure obtained over the northern half of the country east of the Rocky Mountains, with occasional light rains in many localities.

On the 13th a low-pressure area accompanied by generous precipitation appeared in the north Pacific area, and during the next two days overspread the Pacific States and the northern Plateau region; by the 15th this low area had extended to the southern Rocky Mountain region, and thence it moved slowly northeastward to the Lake region, and passed out the St. Lawrence

Valley near the end of the second decade. It was accompanied by much rainy weather from the 15th to the 19th over most sections east of the Rocky Mountains, with thunderstorms in many localities and some rather heavy precipitation. On the 20th and 21st light rains occurred in the central valleys, the lower Lake region and to the eastward, also locally in the Southeast with some heavy thunderstorms in portions of the Florida Peninsula. Light precipitation also prevailed in portions of the North Pacific States. During the next several days relatively high pressure and generally fair weather prevailed over most sections east of the Rocky Mountains, save for a few scattered showers locally.

About the 24th generally low pressure accompanied by moderate precipitation overspread the Pacific States, and by the 26th and 27th, had extended over much of the Plateau and Rocky Mountain and western Great Plains regions, some heavy thunderstorms accompanied by severe winds and destructive hail occurred in several portions of the Southwest. The storm largely dissipated during the next day, but during the last two days of the month relatively low pressure prevailed from the Great Plains westerly to the Pacific, with widespread but moderate precipitation over much of this region, while from the Mississippi River eastward generally fair weather prevailed.

Chart VI and the insets of Charts II and III present the usual information about the mean pressure of the month.

Severe local storms were reported in considerable number, as usually happens with the advance of spring. The customary table of these storms may be found at the end of this section.

## TEMPERATURE

The month was mainly much warmer than normal, the notable exception being the cold spell during the final decade affecting most central and eastern portions.

The first week, while decidedly warm in the western half, was mostly but a little warmer than normal in the eastern half of the country, and in considerable portions of the Ohio Valley and the Middle Atlantic States averaged a trifle colder than normal. Except in part of Florida the second week was everywhere warmer than normal, with marked excess of temperature over the Plains region, the Ohio and middle and upper Mississippi Valleys and the upper Lake region. After the middle of the month warmth continued to prevail in the majority of States, but the weather became somewhat cooler from the northern half of the Plains eastward. About the 22d to 24th a cold wave, well-developed for late April, set in over the north-central portions and districts to eastward as well as many portions to southward. This cold area continued for several days to dominate the weather in the lower Lake region and the interior portions of the Middle and North Atlantic States, but gave way to milder weather before the month closed. The final portion of the month was mainly a little warmer than normal in the western third of the country and the west Gulf region, but some portions of the Southwest and of the Pacific States were slightly cooler than normal at this time.

The month averaged warmer than normal everywhere west of the Mississippi River and in nearly all southern districts to eastward, also in practically all of the Ohio Valley and the upper Lake region and in some portions

of the lower Lake region and southeastern New England. In a strip east of the Rocky Mountains, from Montana to west-central Texas, the excess of temperature was  $8^{\circ}$  to  $9^{\circ}$  per day, and from the interior of the Pacific States to the Mississippi River it was usually at least  $4^{\circ}$  per day.

From central Virginia and the eastern part of Lake Erie northeastward, April averaged in most districts moderately colder than normal.

From Montana, Idaho, and eastern Washington southeastward over the Rocky Mountain and Plains States, the month was the warmest April or almost the warmest to be found in the records. The highest temperatures recorded about the 8th to 12th from the vicinity of the Black Hills eastward and southeastward to the coasts of Virginia and the Carolinas were the highest April marks ever noted at a large proportion of the stations, and at many others they exceeded the previous highest marks of the first half of April. This five-day period included the highest marks of the month in almost two-thirds of the States. However, several Plateau and Pacific States noted the highest late in the first week of April, and the reading of  $108^{\circ}$  on the 6th in Arizona, was the highest temperature reported anywhere within the country. Parts of the extreme Northwest noted their highest marks on the 21st and some portions of the Northeast within a few days of the end of the month.

The lowest marks were almost everywhere within previous records. Nearly all States west of the Mississippi River, also some northern States as far east as Ohio and Michigan, recorded them on the 1st or 2d. Several States from Mississippi northeastward to New England reached their lowest temperatures on the 8th, 9th, or 10th, and North Carolina, Kentucky, and the Southern Middle Atlantic States on the 24th or 25th. The very lowest was  $-4^{\circ}$  on the 1st at an elevated point in Wyoming. In every State save the few that border the Gulf of Mexico and nowhere attain an elevation of a thousand feet, there was some point where freezing was recorded.

#### PRECIPITATION

In only one-seventh of the States did the April precipitation equal or exceed the normal and in several South Central and Southeastern States it averaged less than half of the normal. Furthermore the distribution in point of time was especially unfavorable in many districts. The first 10 or 15 days were mainly dry and in numerous localities without appreciable rain in the Plains, the Central Valleys and the western part of the Lake region. Much of Arkansas and Louisiana, and a large portion of the country south of the Ohio River received no rain of any consequence after the 6th or 7th until the very last day or two, or in some cases till after April ended.

The April precipitation was greater than normal in most of Florida and some parts of Georgia and South Carolina, in a few parts of the Lake region, and especially in most of the middle and northern Plains and much of western and southern Texas. For the most part the

northernmost districts from Montana to the Pacific coast had an excess, also a large portion of Oregon.

Most of the Southwest had a deficiency, likewise the greater part of Wyoming. In sections where liberal rains are expected in April the deficiency was most marked from the eastern portions of Oklahoma and Texas eastward to include the southern and central Appalachian region and northward to include all the basin of the Ohio River. Numerous stations in this area found this the driest April shown by their records.

In substantially all portions of the country for which the amounts have not been specified by the preceding paragraphs, the precipitation of April fell short of normal, but not to a marked degree.

In the eastern half of the country, as a whole, the forest-fire hazard was as great or greater this April than in any other spring month for many years, and the fire losses reported were unusually large. In numerous States this situation continued well into May.

The largest amount of precipitation reported at any station during the month of April, 1930, was 14.45 inches, at a place in western Washington. Away from the immediate Pacific coast the greatest quantity measured was 13.51 inches, at Sinton, in southeastern Texas.

#### SNOWFALL

The snowfall of April was of little importance. The eastern portion of Ohio, northwestern Pennsylvania, the vicinity of Lake Ontario and most parts of the middle and northern Appalachians recorded moderate amounts, though usually less than the average falls indicated by previous April records. In east-central Wisconsin and northern lower Michigan there were moderate falls, also in north-central Nebraska and part of the Black Hills region. Except for these districts just noted the month brought decidedly little snow throughout the region from western Wisconsin and the western shores of Lake Superior to the northern foothills of the Rocky Mountains.

In the higher portions of the far West the April snowfall was mainly below normal, and in Wyoming it was particularly scanty. The outlook does not favor a prolonged ample flow in most of the rivers of the West that are fed considerably by melting snows.

#### RELATIVE HUMIDITY

The dry conditions existing over the country as a whole are reflected by the humidity percentages, which over much of the country are found distinctly below the normal, the deficiencies ranging as great as 22 per cent in some portions of the Southeast. On the other hand they were above the normal generally where the precipitation was greater than the average, as in the Florida Peninsula, and portions of the Lower Lakes, central Great Plains, northern Rocky Mountains, northern Pacific and central Plateau regions.